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PATENT

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Oh-Hun Kwon et al.

Title: ZIRCONIA TOUGHENED ALUMINA ESD SAFE CERAMIC  
COMPOSITION, COMPONENT, AND METHODS FOR MAKING SAME

Application No.: 10/720,982

Filed: November 24, 2003

Examiner: Karl E. Group

Group Art Unit: 1755

Atty. Docket No.: 1035-PM4269-US

MS AMENDMENT  
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Alexandria, VA 22313-1450

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- ☒ Form(s) PTO/SB/08A and/or PTO/SB/08B or PTO/1449  
☐ Other: n/a

to the Examiner's attention in the above-identified application. Citation of such information shall not be construed as:

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Typed or Printed Name

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indicates the degree of relevance found by the foreign office.

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This Information Disclosure Statement is being filed:

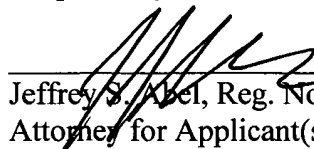
- ☐ within three months of the filing date of a national application or within three months of entry of the national stage as set forth in § 1.491 in an international application. Therefore, no fee is required.
- ☒ before the mailing date of a first Office action on the merits or before the mailing date of a first Office action after the filing of a request for continued examination under § 1.114. Therefore, no fee is believed required.
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Date

8/10/06

Respectfully submitted,



Jeffrey S. Abel, Reg. No. 36,079

Attorney for Applicant(s)

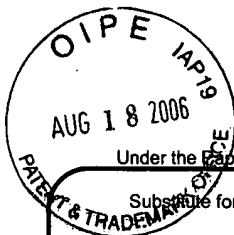
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PTO/SB/08A (07-05)

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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**Complete if Known**

Application Number	10/720,982
Filing Date	November 24, 2003
First Named Inventor	Oh-Hun Kwon et al.
Art Unit	1755
Examiner Name	Karl E. Group
Attorney Docket Number	1075-PM4269-US

Sheet 1 of 3

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
	A1	US- 3,502,597	03/24/1970	Bush	
	B1	US- 5,612,144	03/18/1997	Shinohara et al.	
	C1	US- 5,830,819	11/03/1998	Shikata et al.	
	D1	US- 5,958,813	09/28/1999	Aida et al.	
	E1	US- 6,669,871 B2	12/30/2003	Kwon et al.	
	F1	US-			
	G1	US-			
	H1	US-			
	I1	US-			
	J1	US-			
	K1	US-			
	L1	US-			
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**FOREIGN PATENT DOCUMENTS**

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		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
	T1	DE 3743630 C1	03/16/1989	Siemens AG	English Abstract	
	U1	JP 3-005363	01/11/1991	Kyocera Corporation	English Abstract	
	V1					
	W1					
	X1					
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Sheet	2	of	3	Attorney Docket Number	1075-PM4269-US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	A2	AJ Wallash, "Electrostatic Discharge (ESD) in Magnetic Recording: Past, Present and Future", Proc. of Understanding ESD in Magnetic Recording, IDEMA, pgs 3-20, 2000.	
	B2	AJ Wallash, et al., "ESD Failure Mechanisms of Inductive and Magneto-resistive Recording Heads," EOD/ESD Symposium 95, pgs 322-330 (1990).	
	C2	J. Elston, et al., "Study of High-temperature Electrical Properties of Zirconia and Lanthanum Chromite Sinters," Proceedings of a Symposium on Magnetohydrodynamic Electrical Power Generation, pgs 1601, 389-403 (1966).	
	D2	C. Lam, "Characterization of ESD Tweezers for Use with Magneto-resistive Recording Heads", EOS/ESD Symposium 1996, pgs. 14-21.	
	E2	K. Kim, et al., "Advancements in Inherently Dissipative Polymer (IDP) Alloys Provide New Levels of Clean, Consistent ESD Protection", EOS/ESD Symposium 2000, pgs. 132-138.	
	F2	R. Wilhelm et al., "Iron Oxide-doped Yttria-Stabilized Zirconia Ceramic: Iron Solubility and Electrical Conductivity", AM. Ceram. Soc. Bull., Vol. 58, No. 2, pgs 228-232, 1979.	
	G2	N. Pratten, "Review, The Precise Measurement of the Density of Small Samples", J. Material Sci., Vol. 16, pgs 1937-1947 (1981).	
	H2	ASTM: D257-93, "Standard Test Method for DC Resistance or Conductance of Insulating Materials."	
	I2	FED. Test Method Std. No. 101, "Electrostatic Properties of Materials," Rev. B, Method 4046, Jan. 1969; Rev. C, Method 4046.1, Oct. 1982, Change Notice 1.	
	J2	N. Joassen, "Static-Electric Characterization of Semi-Insulating Materials", EOS/ESD Symposium EOS-6, 1984.	

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Sheet	3	of	3
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	A3	G. Baumgartner, "Electrostatic Decay Measurement, Theory and Applications", EOS/ESD Symposium 1995, pgs 265-272.	
	B3	M. Islam, et al., "Defect Chemistry of LaBO <sub>3</sub> (B=La, Mn or Co) Perovskite-type Oxides, " J. Chem. Soc., Faraday Trans, 92930, pgs. 479-482 (1996).	
	C3	M. DeBarr et al., "Conduction Mechanism in the La(Al, Mn) <sub>3</sub> System", Point Defects and Related Ceramics, Ed. T.O. Mason, et al., Ceramic Trans. Vol. 24, Am. Ceram. Soc., pgs. 229-238, 1991.	
	D3		
	E3		
	F3		
	G3		
	H3		
	I3		
	J3		

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